

**MINUTES  
PUTNAM COUNTY REGIONAL PLANNING COMMISSION  
APRIL 4, 2023**

The Putnam County Regional Planning Commission met on April 4, 2023, at the Cookeville Community Center at 6:00 PM. Members present were Chairman Jere Mason, Secretary Dale Moss, Jeff Jones David Mattson, Ted McWilliams, and Phil Wilbourn. Vice-Chair Terry Randolph, Adam Johnson, and Jim Martin were absent. Also present were Planning Director Rush, Planning Commission Engineer Patrick Rinks, Sam Tays, Ron Brown, Allen Maples and Colby Grissom of Maples Surveying, Charles Whittenburg and Taylor Dillehay of Whittenburg Surveying, Lynn Lafever, Betsy Scarborough of Stonecom Communications and Jim Herren from the Herald-Citizen.

**ITEM 1: CALL TO ORDER AND ROLL CALL.**

Chairman Jere Mason called the meeting to order after a quorum was established.

**ITEM 2: APPROVE THE APRIL 4, 2023 AGENDA.**

Planning Director Rush stated that item 9A had been withdrawn by the surveyor. Jeff Jones moved to approve the agenda for the April 4, 2023 meeting with 9A being withdrawn. Motion was seconded and approved unanimously.

**ITEM 3: MINUTES OF THE MARCH 7, 2023 MEETING.**

Dale Moss moved to approve the March 7, 2023 Minutes. Motion was seconded and approved unanimously.

**ITEM 4: SUBDIVISION REGULATIONS AMENDMENTS.**

Staff stated that the public hearing for this amendment was held at the February 7, 2023 planning commission meeting and the comments made by the public were incorporated into the amendment. The amendment was split it to two resolutions, one adopting the ability for the planning commission to require traffic studies (resolution 2023-003A) and one with the requirements for traffic studies (resolution 2023-003B).

- A. **Resolution #2023-003A** to add language so the planning commission can require a traffic study as part of the development approval.

**AMENDMENT 2023-003A**

**AN AMENDMENT TO THE PUTNAM COUNTY SUBDIVISION REGULATIONS REGARDING, TRAFFIC STUDIES**

**WHEREAS**, as stated under *Section 13-3-403 of the Tennessee Code Annotated*, inclusive, authorizes the Putnam County Regional Planning Commission to revise the Subdivision Regulations that will protect the health, safety, and welfare of the general public; and

**WHEREAS**, a revision of the subdivision regulations is sometimes required because of changes to state law and/or because of Supreme Court of Tennessee or Supreme Court of the United States rulings; and

**WHEREAS**, a revision of the subdivision regulations can be made to clarify the regulations; and

**WHEREAS**, a public hearing was held on February 7, 2023, with public notice of public hearing published on December 23, 2023 in the Herald Citizen Newspaper; and

**WHEREAS**, all public comments were taken considered and the proposed regulations changed accordingly; and

**WHEREAS**, the Putnam County Regional Planning Commission voted on April 4, 2023, to amend the Putnam County Subdivision Regulations, and

**NOW, THEREFORE, BE IT RESOLVED** by the Putnam County Regional Planning Commission as follows:

**SECTION I:** The Subdivision Regulations for Putnam County, Tennessee as indicated shall be amended as follows:

**The existing language in Article III, Section B(2)k is hereby deleted and replaced with the following:**

k. Existing Streets affected by Proposed Subdivision

The subdivision of property abutting existing streets that do not meet the minimum construction standards of these regulations or that may not be capable of effectively carrying the increase in traffic to be generated by the proposed subdivision development at total build out, shall generally be prohibited.

For any subdivision proposed on an existing county street, if in the opinion of Putnam County that the existing county street is not capable of handling the proposed development in a safe and efficient manner, the developer/subdivider may be required to submit a traffic study. As a condition of preliminary plat approval, a traffic study shall be prepared by a traffic engineer or transportation planner with demonstrated experience and expertise in Traffic Impact Analysis. Said study is to specify both on and off-site transportation improvements within the vicinity of the proposed subdivision as required to effectively and safely manage existing and proposed traffic volumes at the current level of service of the street(s). Traffic studies shall be reviewed on behalf of the County by a traffic engineering or transportation planning consultant with similar qualifications. The services of the County's traffic study reviewer are payable by the applicant.

Traffic Study Guidelines are found in Appendix G of these regulations.

For the purposes of these regulations no subdivision of property shall be approved that will not be properly serviced by an adjoining and/or proposed network of streets, lanes, and signalization appurtenances at the time of final plat approval, or at the time of the release of the surety instrument or financial guarantee.

Should improvements to the existing street be required to meet the demands of the proposed subdivision, the plat shall not be approved until such time as the required improvements have been completed.

**SECTION II:** This amendment shall become effective following adoption by the planning commission:

Chairman, Putnam County Regional Planning Commission

Date

ATTEST:

Secretary, Putnam County Regional Planning Commission

Date

B. **Resolution #2023-003B** to add traffic study standards.

#### **AMENDMENT 2023-003B**

#### **AN AMENDMENT TO THE PUTNAM COUNTY SUBDIVISION REGULATIONS REGARDING, TRAFFIC STUDIES**

**WHEREAS**, as stated under *Section 13-3-403* of the *Tennessee Code Annotated*, inclusive, authorizes the Putnam County Regional Planning Commission to revise the Subdivision Regulations that will protect the health, safety, and welfare of the general public; and

**WHEREAS**, a revision of the subdivision regulations is sometimes required because of changes to state law and/or because of Supreme Court of Tennessee or Supreme Court of the United States rulings; and

**WHEREAS**, a revision of the subdivision regulations can be made to clarify the regulations; and

**WHEREAS**, a public hearing was held on February 7, 2023, with public notice of public hearing published on December 23, 2023 in the Herald Citizen Newspaper; and

**WHEREAS**, all public comments were taken considered and the proposed regulations changed accordingly; and

**WHEREAS**, the Putnam County Regional Planning Commission voted on April 4, 2023, to amend the Putnam County Subdivision Regulations, and

**NOW, THEREFORE, BE IT RESOLVED** by the Putnam County Regional Planning Commission as follows:

**SECTION I:** A new appendix is hereby created, named Appendix G: Traffic Study Guidelines and will read as follows:

#### **SECTION 1: GENERAL**

The objective for a traffic study shall be to maintain acceptable levels of capacity and design for travel as new development occurs within the planning jurisdiction of the Putnam County Government (hereinafter the County).

#### **SECTION 2: APPLICABILITY**

These guidelines are applicable to any development in the unincorporated Putnam County for which a traffic study is required.

#### **SECTION 3: LEVEL OF SERVICE STANDARDS**

It is the policy of the County that all roadways, intersections, and access points shall be designed so that traffic to and from new developments shall not reduce the current level of service of the existing street network and all improvements shall be designed to a Level of Service C or better.

#### SECTION 4: DESIGN STANDARDS

Where posted speed limits are higher than 30 mph, the County may require a county roadway to be designed to meet a higher AASHTO design standard. For state highways, for access points to state highways, and for intersections with state highways, design standards are determined by the Tennessee Department of Transportation (TDOT).

Subdivision Standards require 10' travel lanes with 3' shoulders. Existing and projected levels of traffic determine whether travel lanes and/or shoulders will be required to be widened and to what extent. Cross section standards for state highways are determined by the TDOT.

No developer implemented roadway modifications within the right-of-way shall occur unless such modifications are approved by the Highway Superintendent, the Putnam County Highway Commission, or the TDOT, as applicable. Written notice of this approval shall be received by the Putnam Planning Department staff prior to consideration of the development proposal by the Planning Commission.

For developer funded roadway modifications, right-of-way acquisition and/or utility relocations shall be the responsibility of the developer, and at the developer's expense.

#### SECTION 5: PREPARER AND REVIEWER QUALIFICATIONS

A traffic study shall be conducted by a traffic engineer or transportation planner with demonstrated experience and expertise in Traffic Impact Analysis. Traffic studies shall be reviewed on behalf of the County by a traffic engineering or transportation planning consultant with similar qualifications. As detailed below, the services of the County's traffic study reviewer are payable by the applicant.

#### SECTION 6: TRAFFIC STUDY PROCEDURES

Prior to the commencement of a traffic study, a pre-study meeting may be scheduled between the applicant and planning staff, either by teleconference or at the offices of the Putnam Planning Department. The pre-study meeting shall include representatives of the Putnam Planning Department staff, the traffic consultant who will review the traffic study on behalf of the County, the applicant, and the applicant's traffic consultant. The purpose of the pre-study meeting will be to review pertinent aspects of the proposed development, to determine the type of traffic study to be conducted, and to finalize the roles, time frames, scope of work, and proposed methodologies for the traffic study. Traffic study methodologies will include, but not be limited to, proposed trip generation rates, adjustments for passby trips and internal trips, trip reduction strategies, and the methodologies to be used for trip distribution and assignment.

The consultant hired by the County shall prepare a cost estimate for the review of the traffic study. Upon the payment of this cost to the County, the County will authorize the applicant to proceed with the traffic study.

Upon the receipt of a traffic study report by the County, the consultant hired by the county shall initiate a sufficiency review. If it is determined that a traffic study has been submitted that is not sufficient in relation to the County's traffic study guidelines as set forth below, then the County may determine the amount of any additional costs payable to the county prior to a further review of the traffic study.

These payments shall be in addition to any other fees or costs that may be required to be paid by the applicant to the County.

In order to expedite a timely review, a traffic study shall be submitted to the County not less than two (2) weeks prior to the agenda deadline for the Planning Commission meeting at which the proposed new development is to be initially considered. A sufficiency determination will be issued to the applicant on or before the agenda deadline. If the traffic study is determined to be insufficient in relation to these traffic study guidelines, then consideration of the proposed new development may be withheld from the Planning Commission agenda.

Traffic studies for developments proposed to be located within municipal growth areas shall be submitted by the County to affected municipal or regional Planning Commissions for their review and comment, in accordance with established procedures for intergovernmental planning commission review. Prior to taking any formal action regarding these studies, the County will review pertinent comments that are received under these procedures.

If a traffic study includes recommendations for new or modified access points to state highways, significant modifications to existing state highways, or new state highway or transportation facilities, the applicant shall demonstrate that the TDOT has reviewed these recommendations and is in agreement with them.

A traffic study shall closely correspond with the site plan that is submitted for the approval of the proposed new development.

## SECTION 7: THRESHOLDS FOR COUNTY TRAFFIC STUDIES

### (A) INTRODUCTION

- (1) The applicant shall review the ITE trip generation manual (7th Edition or Newer); in order to determine:
  - a.) the number of trips likely to be generated by the proposed development in the p.m. peak hour; and
  - b.) the capacity classifications and corresponding LOS C service volumes for the designated arterial and collector roadways that will provide access to the proposed development.
- (2) No traffic study or highway capacity adjustment shall be required if it is determined that the number of trips likely to be generated by a proposed new development would not add more than one percent of the LOS C service volume of any of the designated arterial and collector roadway(s) that will provide access to the proposed development.
- (3) Traffic studies shall be required as follows:
  - a.) A Traffic Access Analysis (TAA) shall be prepared for developments that would potentially generate fewer than 50 p.m. peak hour trips.
  - b.) A Traffic Impact Analysis (TIA) shall be prepared for developments that would potentially generate between 50 and 400 p.m. peak hour trips.
  - c.) A Traffic Impact Study (TIS) shall be prepared for all developments that would potentially generate 400 or more p.m. peak hour trips. The county also has the option to allow or require a Traffic Impact Study to be prepared for a proposed new development that would potentially generate fewer than 400 p.m. peak hour trips.

TABLE 1: TRAFFIC STUDY THRESHOLDS

Table I: Traffic Study Thresholds shows the thresholds for the traffic study types that are described above.

Threshold in PM peak hour trips	Traffic Study Type
<50	Traffic Access Analysis (TAA)
50-400	Traffic Impact Analysis (TIA)
>400	Traffic Impact Study (TIS)

* Or for any development as the County deems necessary	TBD by County, depending on the site-specific factors and the level of development
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## SECTION 8: TRAFFIC STUDY ELEMENTS

### 1) INTRODUCTION

All traffic studies shall include a general description of the proposed new development, including a vicinity map and a site map, as well as a brief narrative, to show:

- A. the location of the proposed development;
- B. the number and location(s) of proposed access point(s);
- C. whether or not the development is within a municipal growth area;
- D. the existing use of the land proposed for development;
- E. existing land uses and development trends in the area;
- F. transportation facilities that will provide access to the development, noting the official route numbers of any state highways;
- G. existing traffic levels; and
- H. factors affecting future traffic.

### 2) ELEMENTS OF A TRAFFIC ACCESS ANALYSIS (TAA)

- A. When a proposed new development would potentially generate up to 50 p.m. peak hour trips, a Traffic Access Analysis shall be conducted.
- B. For a Traffic Access Analysis, the study area shall be limited to the roadway segments that provide direct access to the proposed new development.
- C. Depending on the scale and location of the proposed new development, and subject to county approval, existing available traffic counts may be utilized in lieu of new traffic counts.
- D. Trip generation forecasts, determination of the buildout year, and the determinations of background traffic, shall generally follow the relevant procedures that are to be used in preparing a Traffic Impact Study, as shown below.
- E. The Traffic Access Analysis shall address the proposed number and type of dwelling units, and/or if applicable, the land use and square footage for each proposed nonresidential use within the new development.
- F. For the a.m. and p.m. peak hours, directional assignments of inbound and outbound site generated traffic shall be determined for each proposed access point.
- G. For roadway segments within the study area, a roadway level of service analysis shall be conducted, utilizing the appropriate methodology(ies) that are documented in the latest edition of the Highway Capacity Manual (HCM). For capacity analyses of two lane roadways within the study area, the preferred methodology shall be the "Two Lane Highways" methodology documented in the HCM.
- H. For existing, background, or combined background and site generated traffic, the study shall note any roadways in the study area where levels of service may be deficient in relation to the Level of Service standards that are noted above.
- J. If there is a potential for the correction of any identified level of service deficiencies, then recommendation(s) for appropriate mitigation measures may be included in the Traffic Access Analysis Report.
- K. For Traffic Access Analyses, mitigation recommendations shall be follow the procedures described below for Traffic Impact Studies
- L. If a recommended mitigation measure involves a state highway, then the design for the recommended modification shall be subject to the review and approval of the Tennessee Department of Transportation (TDOT).
- M. The Traffic Access Analysis report shall include maps and tables that show the location of the proposed new development; traffic shed boundaries in the vicinity; trip generation by land use type; and existing, background, and combined background and site generated traffic at access points and on roadways within the study area.

- O. The Traffic Access Analysis report shall also include relevant analysis worksheets, and may also include buildout year documentation and copies of cost estimates for comparable roadway modification projects.
- P. The recommended elements for a typical Traffic Access Analysis are generally noted in Table 2: Traffic Study Elements.

### 3) ELEMENTS OF A TRAFFIC IMPACT ANALYSIS (TIA)

When a proposed new development would potentially generate between 50 and 400 p.m. peak hour trips, a Traffic Impact Analysis shall be conducted.

- A. Study Area
  - 1. For proposed developments that would potentially generate between 50 and 400 p.m. peak hour trips, the study area for a Traffic Impact Analysis shall include proposed access points, the major intersections that are closest to each proposed access point, and the roadway segments that are located between each access point and the major intersections that have been identified.
  - 2. For other proposed developments that would potentially generate between 50 and 400 p.m. peak hour trips, the study area shall include the traffic shed(s) where the proposed development would be located.
- B. Study Elements
  - 1. For proposed developments that would potentially generate between 50 and 400 p.m. peak hour trips, a Traffic Impact Analysis shall include:
    - 2. Determination of the buildout year and background traffic estimates;
    - 3. Trip generation forecasts;
    - 4. A.M. and P.M. peak hour turning movement counts at proposed access points and at major intersections within the study area;
    - 5. Distribution and assignment of site generated traffic;
    - 6. A.M. and P.M. peak hour intersection capacity analyses - of background traffic and of background and site generated traffic - for each proposed access point and for major intersections within the study area;
    - 7. At access points and at major intersections within the study area, the identification of
    - 8. potential A.M. and P.M. peak hour level of service deficiencies;
    - 9. A review of existing sight distances, roadway alignments and roadway cross sections within the study area;
    - 10. The identification of potential intersection or roadway design deficiencies; and
    - 11. Recommendations for the mitigation of intersection capacity deficiencies and intersection and roadway design deficiencies.

Each of the above steps shall follow a methodology that is generally consistent with the corresponding methodology shown below for Traffic Impact Studies.

- C. Warrant Analyses
  - 1. For all proposed developments that would potentially generate between 50 and 400 p.m. peak hour trips, warrant analyses shall be conducted in accordance with the procedures described below for Traffic Impact Studies.
- D. Mitigation and Phasing
  - 1. Procedures for the analysis of mitigation and phasing shall be in accordance with the applicable procedures described below for Traffic Impact Studies.
  - 2. If any recommended modification involves a state highway, then the design for recommended modification shall be subject to the review and approval of the TDOT.

### 4) TRAFFIC IMPACT ANALYSIS REPORT

- A. The Traffic Impact Analysis report shall include a site plan and a location map for the proposed development, as well as tables showing trip generation by land use type.
- B. For proposed developments that would potentially generate between 50 and 400 p.m. peak hour, the Traffic Impact Analysis report shall also include:
  - 1. Schematic diagrams showing existing, background, site traffic distribution and assignment, and combined traffic, for all major intersections and roadways within the study area; and
  - 2. The results of all capacity, warrant, and design analyses.

- C. For all proposed developments that would potentially generate between 50 and 400 p.m. peak hour trips, the Traffic Impact Analysis report shall also include:
  - 1. Significant findings from the Traffic Impact Analysis;
  - 2. Recommendations with respect to mitigation, phasing, and right of way analyses; and
  - 3. A determination that recommended transportation modifications are consistent with relevant adopted local major thoroughfare plans or regional long range transportation plans.
- D. For any recommended modifications that involve state highways, the Traffic Impact Analysis Report shall also include documentation of coordination activities with appropriate representatives of the TDOT, as well as any findings or recommendations by TDOT officials regarding recommended roadway modifications.
- E. An appendix to the Traffic Impact Analysis report shall include relevant analysis worksheets. As determined at the pre-study meeting, the appendix may also include buildout year documentation and copies of cost estimates for comparable projects.
- F. The recommended elements for a typical Traffic Impact Analysis are generally noted in Table 2 below.

#### 5) ELEMENTS OF A TRAFFIC IMPACT STUDY (TIS)

A Traffic Impact Study shall be conducted when a proposed new development would potentially generate 400 or more p.m. peak hour trips. The County also has the option to allow or require a Traffic Impact Study to be conducted for a proposed new development that would potentially generate fewer than 400 p.m. peak hour trips.

In addition to determining whether or not sufficient traffic capacity is either available or can be provided cost effectively, a Traffic Impact Study shall also address the design of the local roadway network in relation to the scale of a proposed new development.

- A. Study Area
  - 1. The study area for a Traffic Impact Study shall be determined at the pre-study meeting. At a minimum, the study area for a Traffic Impact Study shall include all of the major intersections and arterial and collector roadways whose levels of service may change due to traffic to or from the proposed new development; as well as the major intersections and arterial and collector roadways that are located between the proposed new development and the nearest major freeway interchange; whichever is more inclusive.
- B. Existing Traffic Counts
  - 1. To determine existing traffic, hourly turning movement counts shall be conducted at each of the major intersections that have been identified within the study area at the pre-study meeting. The specific hours for turning movement traffic counts will be determined at the pre-study meeting;
  - 2. In addition, 24-hour automatic traffic counts shall be conducted at critical locations along arterial and collector roadways within the study area. The specific days and locations for automatic traffic counts will be determined at the pre-study meeting; and
  - 3. Within the study area, a Traffic Impact Study shall also document existing available TDOT traffic counts, along with any existing available municipal traffic counts.
- C. Buildout Year Determination
  - 1. Determination of the buildout year shall be based on documented market absorption rates in the area of the proposed new development.
- D. Background Traffic Estimates
  - 1. Existing traffic counts shall be converted into background traffic estimates in two steps:
    - Step 1- Growth rates applied to existing traffic counts shall be consistent with growth rates at TDOT traffic count stations located within the study area, OR growth rates shall be based on an interpolation of existing traffic counts and available traffic forecasts documented in either an existing adopted major thoroughfare plan or the current Nashville Area Metropolitan Planning Organization (NAMPO) long range transportation plan.
    - Step 2- If there are any approved developments that have not been completely built out and that would potentially add a significant amount of traffic to any intersections or roadways within the study area, traffic to and from these developments shall be included in the background traffic estimates that are to be used for a Traffic Impact Study.
  - At the pre-study meeting, specific procedures will be determined for converting existing traffic counts into background traffic estimates.
- E. Trip Generation



1. Typically, trip generation forecasts shall be developed for both the a.m. peak hour and the p.m. peak hour. The specific peak hours for analysis will be reviewed at the pre-study meeting.
  2. Preferably, these forecasts shall be derived from the trip generation rates or equations that are documented in the latest (8th or later) edition of the ITE Trip Generation Report. The Traffic Impact Study report shall document the specific rates or equations used in the study. If alternative rates or equations are used, their use shall be reviewed at the pre-study meeting, and shall also be documented in the Traffic Impact Study report. If an alternative trip generation rate or equation is used, then the Traffic Impact Study report shall include any resulting differences in trip generation forecasts.
- F. Adjustments for Passby Trips, Internally Captured Trips, and Proposed Trip Reduction Strategies
1. Subject to authorization on behalf of the County at the pre-study meeting, trip generation forecasts may be adjusted to account for:
    - a) Passby trips, i.e. trips to or from a proposed new development that may be drawn from the stream of existing or background traffic; as well as
    - b) Internally captured trips, i.e. trips that may begin and end within the boundaries of a proposed new development; and
    - c) Proposed trip reduction strategies.
  2. Adjustments to reflect passby trips, internally captured trips, and/or trip reduction strategies shall be derived from methodologies published by the Institute of Transportation Engineers (ITE), or by another authority recognized by the County, e.g. a state department of transportation or Tennessee Division of Air Pollution Control.
  3. If traffic study findings are based on the successful outcome of one or more operational trip reduction strategies, e.g. carsharing, then the study shall also include a management and operations plan that demonstrates the feasibility and effectiveness of the proposed operational trip reduction strategy(ies).
- G. Trip Distribution and Assignment
- Trips to and from a proposed new development shall be assigned to the access points, intersections, and arterial and collector roadways that are included in the study area that has been identified. These assignments shall be derived from an approved systems planning model and network (such as the model and network maintained by the Nashville Area MPO), or from observed traffic patterns within the study area. The methodology to be used for trip distribution and assignment will be addressed at the pre-study meeting.
- H. Capacity Analyses
1. For a background traffic scenario and for a scenario that includes both background and site generated traffic, peak hour capacity analyses shall be conducted for access points, major intersections, and roadways. The capacity analysis methodologies used in the Traffic Impact Study shall be consistent with the methodologies documented in the latest edition of the Highway Capacity Manual (HCM). For capacity analyses of two lane roadways within the study area, the preferred methodology shall be the "Two Lane Highways" methodology documented in the HCM;
  2. If it is determined at the pre-study meeting that provisions for non-highway modes of travel are likely to significantly affect the impact of the proposed development upon access points, intersections, or major roadways within the study area, then, subject to county approval at the pre-study meeting, an alternative methodology may be utilized that would provide for the determination of multimodal levels of service;
  3. The capacity analyses shall address existing or proposed stacking distances in relation to the lengths of existing or proposed turn lanes;
  4. Capacity analyses may reflect committed projects that would affect any of the intersections or roadways in the study area, provided that these projects are likely to be completed prior to the buildout year for the proposed new development. In determining the current status of any funding commitments, the Traffic Impact Study findings shall be based on the most current information that is publicly available; and
  5. The Traffic Impact Study report shall include recommendations for any modifications that will be necessary in order to achieve or maintain acceptable levels of service within the Traffic Impact Study area.
- I. Warrant Analyses

1. If any new signal installation is needed in order to provide sufficient capacity at any intersection or site access point, then a signal warrant analysis shall be conducted;
  2. A left turn warrant analysis shall be conducted, following the procedures that are documented in NCHRP Report 457: Engineering Study Guide for Evaluating Intersection Improvements;
  3. A survey shall determine either the presence of a paved shoulder that would be sufficient to provide a paved surface for a right turn deceleration lane at the entrance(s) to the proposed development, in accordance with relevant design standards for width, length, and taper;
  4. If a left turn lane is found to be warranted or if a paved shoulder is not sufficient for the provision of a right turn lane deceleration lane at each proposed site entrance as described above then the Traffic Impact Study shall include recommendation(s) for the provision of additional left turn and/or right turn lanes;
  5. Recommendations for turn lanes shall conform to Section 19:05: Roadway Capacity Modification Options of the County Zoning Ordinance; and
  6. If a proposed site entrance is located on a state highway, then the design for proposed turn lanes at site entrances shall be subject to the review and approval of the Tennessee Department of Transportation (TDOT).
- J. Design Analysis
1. In addition to modifications that are intended to provide sufficient capacity on roadways and at access points and intersections within the study area, additional modifications may be needed in order to provide for acceptable sight distances or to mitigate other intersection or roadway design deficiencies;
  2. The design analysis shall include an assessment of sight distances on roadways and at access points and intersections, noting locations within the study area where applicable AASHTO, state, or county sight distance standards are not met under existing or background conditions;
  3. A similar analysis shall be undertaken in order to identify locations within the study area where applicable alignment or cross section standards are not met. At these locations, existing alignments and roadway cross sections, including lane and shoulder widths, shall be documented in the Traffic Impact Study report. Where potential design deficiencies are identified, the Traffic Impact Study report shall include recommendations for appropriate mitigation; and
  4. The design analysis may reflect ongoing or committed modifications to roadways or intersections within the study area, provided that sufficient funds have been programmed or otherwise committed for the completion of these modifications prior to the buildout year. In determining the current status of any funding commitments, the Traffic Impact Study findings shall be based on the most current information that is publicly available.
- K. Right of Way Evaluation
- The Traffic Impact Study shall note locations where additional rights of way may need to be acquired in order to correct any identified capacity or design deficiencies. This shall be determined through a review of existing available right of way information pertaining to state and county roadways within the study area.
- L. Mitigation
1. For any capacity deficiencies, recommended new turn lanes, or existing sight distance or other design deficiencies that may be identified, the Traffic Impact Study report shall document mitigation recommendations, including a notation of whether or not additional right of way may need to be acquired in order to implement any of these recommendations;
  2. If any recommended modifications are to be funded by a city, the County, the state, or another private entity, then the study shall address the status of the commitment to fund these modifications. For example, a project may be included in an adopted state budget, or it may be already underway. The study report shall also identify the share of the improvement costs that are proposed to be provided by the developer, either in-kind or through a financial contribution. In determining the current status of any funding commitments, the Traffic Impact Study findings shall be based on the most current information that is publicly available; and
  3. Cost estimates shall be consistent with recent bids for comparable projects in the county, the region, or the state. Documentation of comparable cost estimates shall be submitted in order to demonstrate this consistency. As an alternative, cost estimates may be provided for a comparable project that is included in a currently approved and valid MPO Transportation Improvement

Program. Developer-implemented modifications shall be constructed in accordance with the phasing recommendations included in the approved Traffic Impact Study.

M. Phasing

If a Traffic Impact Study report notes that the implementation of a mitigation measure may not be completed at the time of the initial use and occupancy of a proposed new development, then the study report shall include an analysis and recommendation for the phasing of the proposed new development. The Traffic Impact Study report shall demonstrate that the recommended phasing will allow the county's level of service and roadway design standards to be maintained while the proposed new development is underway.

6) Traffic Impact Study Report

- A. The Traffic Impact Study report shall include a site plan and a location map for the proposed development, schematic diagrams showing existing, background, site traffic distribution and assignment, and combined traffic, for all major intersections and roadways within the study area;
- B. Trip generation forecasts shall be tabulated in the Traffic Impact Study report by land use type as well as by phase, as applicable;
- C. The results of all capacity, warrant, and design analyses shall be documented and included in the Traffic Impact Study Report. The report shall also include significant findings and recommendations with respect to right of way evaluation, mitigation, and phasing;
- D. The Traffic Impact Study report shall also note whether or not recommended transportation modifications are consistent with relevant adopted local major thoroughfare plans or regional long range transportation plans;
- E. For recommended mitigation measures that involve multimodal options or trip reduction strategies, the Traffic Impact Study report shall include a management and operations plan that demonstrates their feasibility and effectiveness;
- F. For any recommended modifications that involve state facilities, the Traffic Impact Study report shall include documentation of coordination activities with appropriate representatives of the TDOT, as well as any findings or recommendations by TDOT officials regarding these recommended modifications;
- G. The appendix to the Traffic Impact Study report shall include capacity and warrant analysis worksheets. As determined at the pre-study meeting, the appendix may also include buildout year documentation and copies of cost estimates for comparable projects; and
- H. The recommended elements for a typical Traffic Impact Study are generally noted in Table 2 below.

(G) TABLE 2: TRAFFIC STUDY ELEMENTS

Task	Traffic Access Analysis (TAA)	Traffic Impact Analysis (TIA)	Traffic Impact Study (TIS)
Pre-Study Meeting	X	X	X
Review Thresholds	X	X	
Introduction	X	X	X
Study Area Determination	X	X	X
Traffic Counts	#	X	X
Turning Movement Counts		#	X
Buildout Year Determination	X	#	X

Background Traffic Forecast	X	#	X
Trip Generation Forecast	X	#	X
Adjustments for Passby and Internal Trips		#	X
Adjustments for Trip Reduction Strategies		#	#
Forecast of Background and Site Generated Traffic	X	#	#
Trip Distribution and Assignment	X	#	X
Roadway Capacity Analysis	X	#	X
Intersection Capacity Analysis		#	X
Warrant Analysis		#	X
Design Analysis			X
Recommendations for Mitigation and Phasing	#	#	X
Report	X	X	X
Appendix		#	X
X Required      # Refer to text for additional information			

**SECTION III:** This amendment shall become effective following adoption by the planning commission:

\_\_\_\_\_  
**Chairman, Putnam County Regional Planning Commission**

\_\_\_\_\_  
**Date**

**ATTEST:**

\_\_\_\_\_  
**Secretary, Putnam County Regional Planning Commission**

\_\_\_\_\_  
**Date**

Jere Mason said that this was a starting point and that if it doesn't work like we think it will, we can amend the subdivision regulations to make it work better. Dale Moss moved to approve resolutions 2023-003A and 2023-003B. Motion was seconded and unanimously approved.

**ITEM 5: REVIEW OF APPROVED PRELIMINARY PLATS**

- **Autumn Woods Preliminary Plat (All Phases)**, Vick Surveying. Conditional preliminary approval 4/7/2020. Phases I, II & III have been approved for final. Phase IV remaining.
- **Mountain Brooke Subdivision Preliminary Plat**, Vick Surveying. Conditional preliminary approval 12/8/2020.
- **Glen Oaks Preliminary Plat**, Whittenburg Surveying. Conditional preliminary approval 6/1/2021. Phase I was a single lot approved administratively. Phase II remaining.

- **Pippin Estates Preliminary Plat**, Maples Surveying. Conditional preliminary approval 12/7/2021. Phase II remaining.
- **Forsythia Farms Preliminary Plat**, Whittenburg Surveying. Conditional revised preliminary approval 6/7/2022.
- **Beechtree Park Preliminary Plat**, Vick Surveying. Conditional preliminary approval 6/7/2022.
- **Cane Creek Farms Preliminary Plat**, Batson, Himes, Norvell & Poe Surveying. Conditional preliminary approval 6/7/2022.
- **Brownstone Estate Preliminary Plat**, Clinton Surveying. Conditional preliminary approval 10/4/2022.
- **James Lafever Subdivision Preliminary Plat**, Maples Surveying. Conditional preliminary approval 2/7/2023.
- **Watermark Subdivision Preliminary Plat**, Maples Surveying. Conditional preliminary approval 3/7/2023.

**ITEM 6: ACCEPTANCE OF NEW STREETS:**

- None

**ITEM 7: OUTSTANDING LETTERS OF CREDIT:**

- None

**ITEM 8: ADMINISTRATIVELY APPROVED PLATS:**

**A. EARL AND ANGELA THOMPSON DIVISION, MAPLES SURVEYING**

This plat was to divide parcel 056-019.00 on Virgie Brown into 2 lots.

**B. BROWNSTONE ESTATES PHASE 1, CLINTON SURVEYING**

This plat was to create one 2.17-acre lot on Gainesboro Highway. This lot is intended for commercial use.

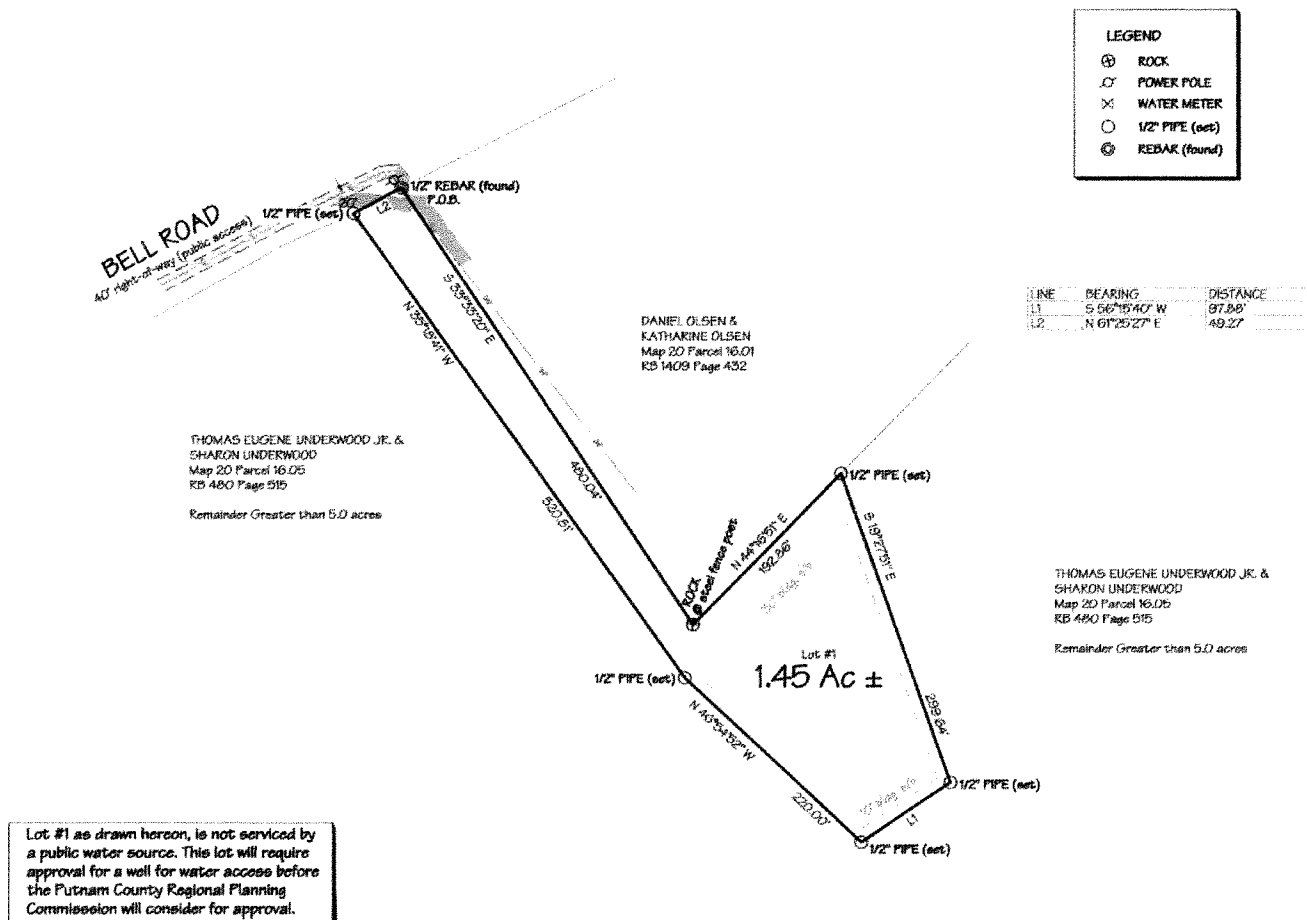
**C. MIKE ALLEN PROPERTY, WIGGINS SURVEYING**

This plat was to divide parcel 009-091.03 on Penthouse Road into 2 lots.

**ITEM 9: SUBDIVISION PLATS:**

**A. THE THOMAS & SHARON UNDERWOOD DIVISION FINAL PLAT, VICK SURVEYING**

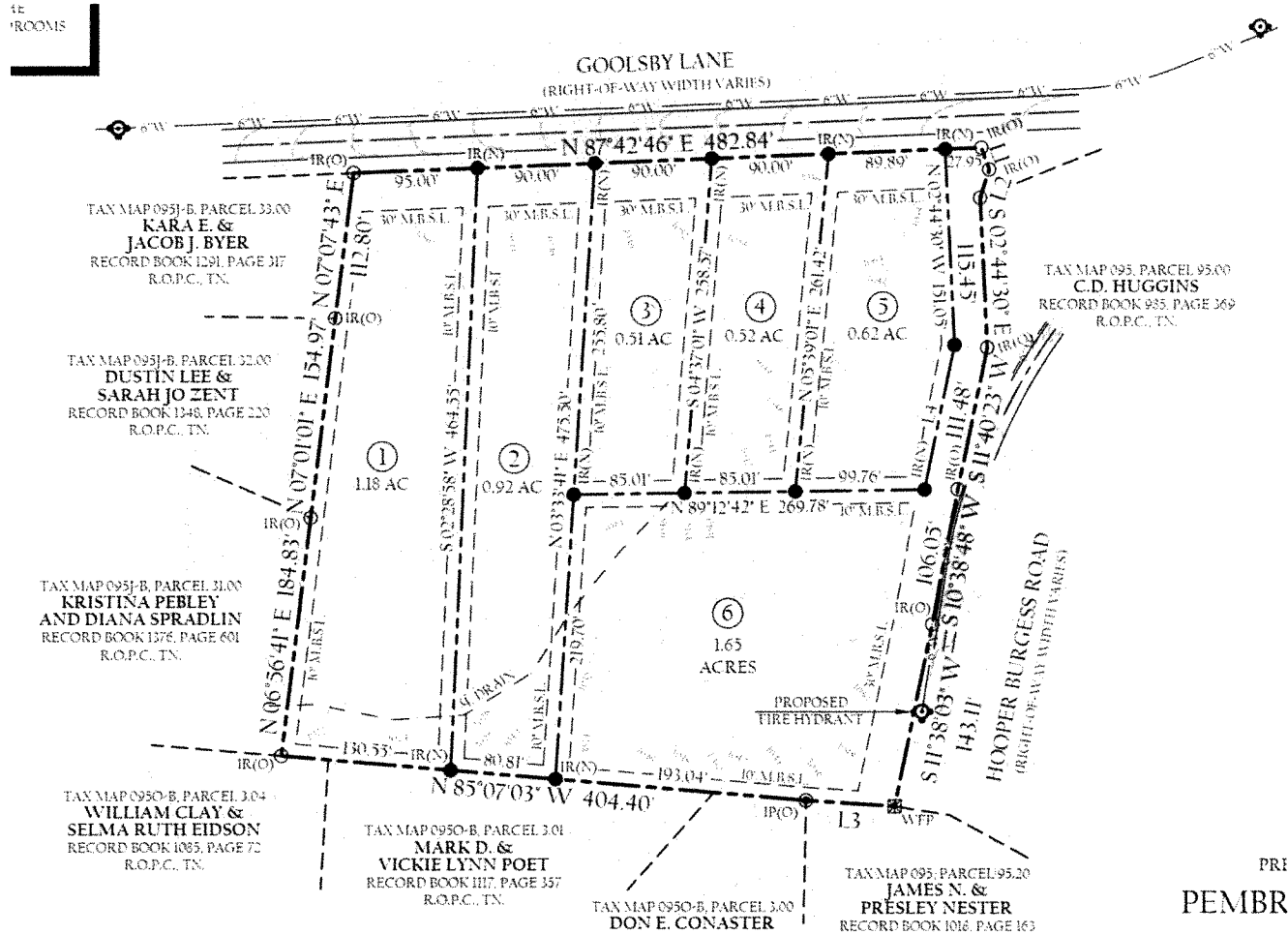
The plat is to create one flag lot at the end of Bell Road from a tract owned by Thomas & Sharon Underwood (<https://tnmap.tn.gov/assessment/?GISLink=071020++++01605>). The pole portion of this lot will be approximately 500 feet. The lot will 1.45 acres. Bell Road has a 14-foot wide tar and chip surface and 24 feet of right-of-way according to the county road list.



This plat was withdrawn prior to the meeting.

## B. PEMBROOK PINES PHASE II PRELIMINARY PLAT, WHITTENBURG SURVEYING

This is a redesigned layout from last month's plat. It now has six lots instead of seven with one flag lot on Goolsby running along the Huggins Property. The lots on Hooper Burgess were essentially combined and made into a flag lot. Lots 1 and 2 were extended to the southern property line which was the rear portion of the lots on Hooper Burgess Road on the previous plat. <https://tnmap.tn.gov/assessment/?GISLink=071095+++09305>



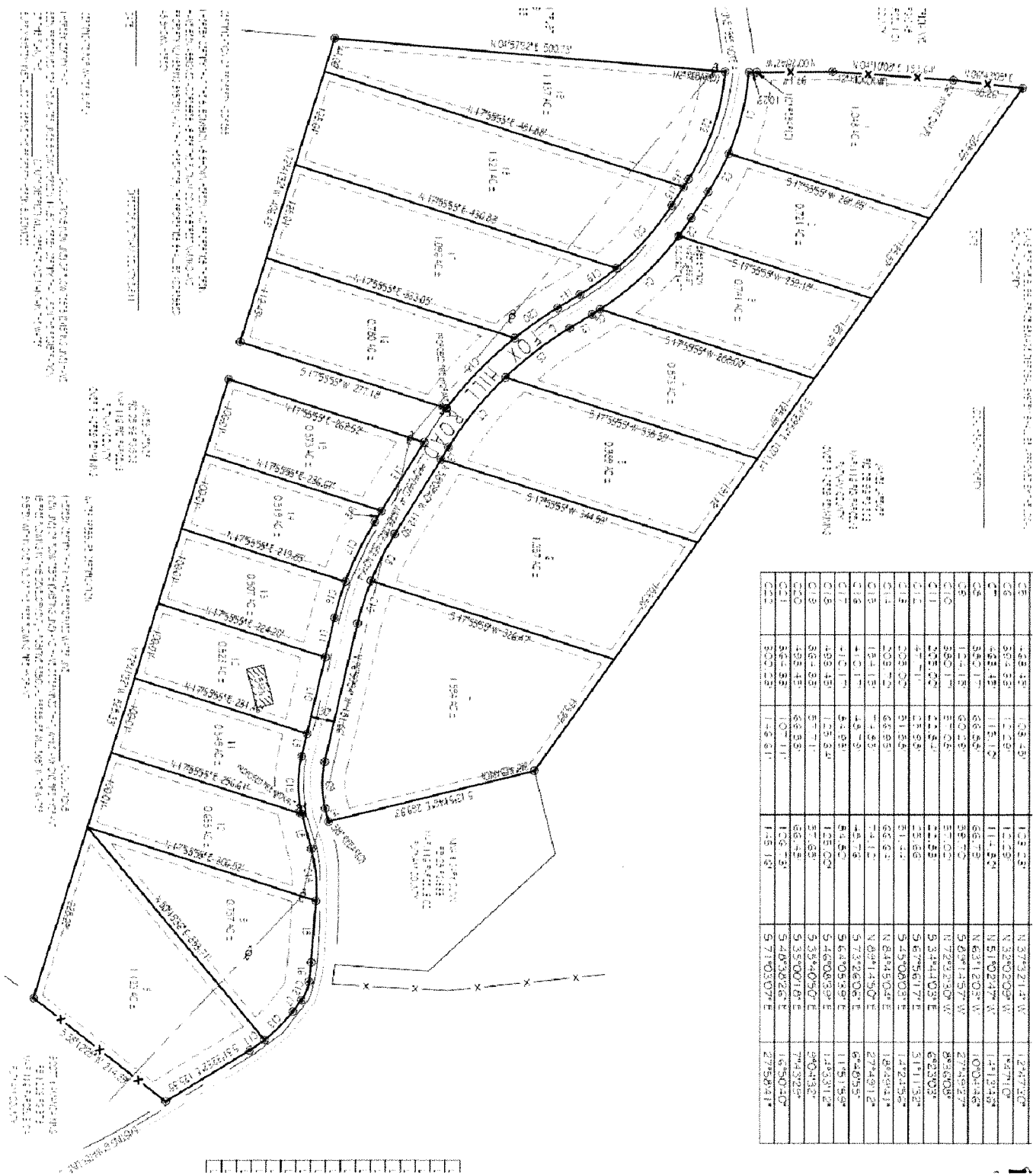
Dave Mattson moved to approve the plat as presented. Motion was seconded and unanimously approved.

**C. JAMES LAFEVER SUBDIVISION FINAL PLAT, WHITTENBURG SURVEYING**

This plat is to create 19 lots on 16 acres of a 45-acre tract on Fox Hill Road at the DeKalb county line. The lots will range in size from 0.507 acres to 1.954 acres and will front on Fox Hill Road, which is now 18ft wide and 1.04 miles long as measured by Randy Jones. There is an existing 6 inch water main along Fox Hill Rd. There are 2 proposed fire hydrants.

Sam Tays stated that Jason Pierce, Cookeville Boat Dock Road Utility District Director, said the existing 4 inch water line would serve the development but since we require 6 inch mains and hydrants, they will upgrade the mains from the end of the existing 6 inch line near Lots 8 and 9 to the proposed hydrant locations, but that has not been completed yet so they propose submitting a \$50,000 Letter of Credit (LOC) to cover the cost until the improvements are installed within the next few months. Tays inquired about a variance using sprinkler systems, but Rush didn't think that would work considering the distance to the 6" water line. He stated that sellers want to sell quickly and if the planning commission does not accept the LOC, instead of waiting, they would do 5 acre lots and not upgrade the mains or install hydrants. Staff stated that with the LOC would ensure that if the developer does not complete the requirements, then the planning commission can cash it to pay to have the improvements completed. Planning Commission Engineer Rinks reported water line improvements including hydrants are typically installed prior to signing off on the final plat rather an LOC and voiced concerns this would set a precedent going forward. Staff recommended that some drainage easements be added to the plat. Mattson felt the amount of the LOC would be adequate for a few years. Ted McWilliams moved to approve the plat with addition of the drainage easements as recommended by Rinks, with language being added to the water certificate stating that no construction will be allowed before the improvements are completed and the deeds being restriction stating that construction will not be commence until all the improvements are completed. Motion was seconded and unanimously approved.

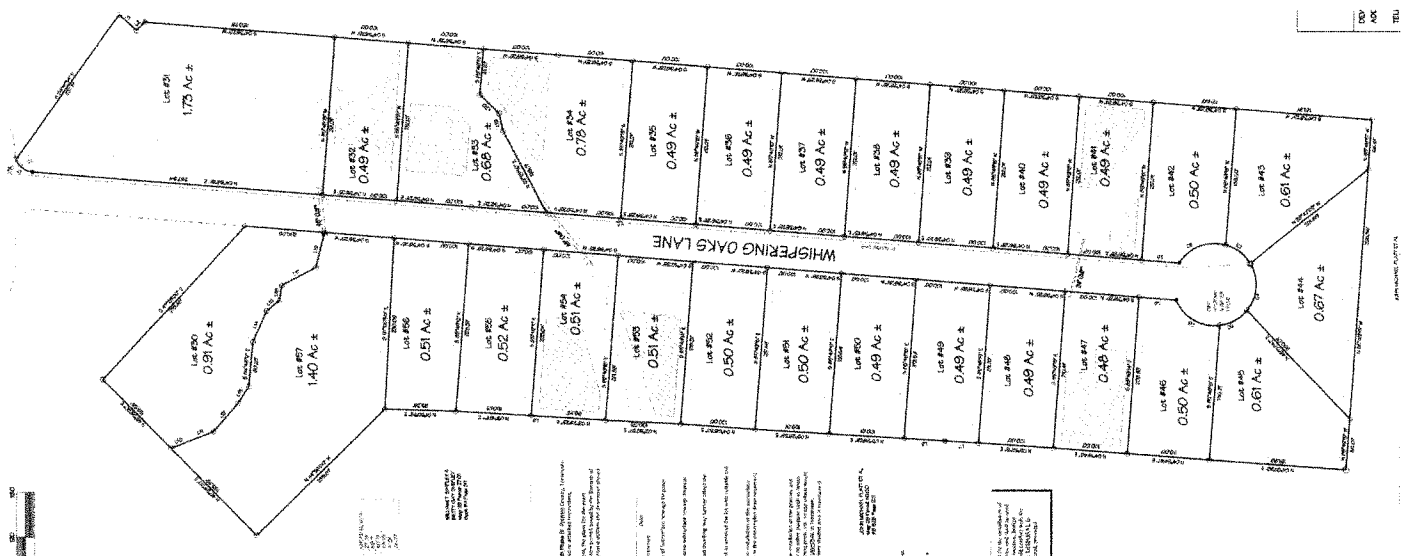




#### D. AUTUMN WOODS PLAT, WHITTENBURG SURVEYING

This is the final phase of Autumn Woods Subdivision. This plat is to create 28 lots on 19 acres. The road is approximately 1650 feet long. They have submitted two \$70,000 letters of credit to guarantee the completion of the street. They have submitted one \$15,000 letter of credit to cover the installation of the electric service, which has not been installed.

Planning Director Rush stated that since the road is more than the 1200 feet maximum listed in the subdivision regulations, a variance will be required. Rinks reported he and Randy Jones had proof rolled the road, approximately 4 inches of rock was on the road, water line and fire hydrants were in and drainage easements had been shown on the plat. Some questions if Lots 32 and 49 were buildable. Dale Moss moved to approve the plat with a variance on the length of the cul-de-sac, subject to signatures. Motion was seconded and unanimously approved.



#### ITEM 10: Other Business:

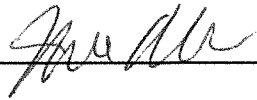
- Charles Whittenburg passed out some information he hoped to discuss at the meeting, but was asked to request to be on next month's Agenda.

#### ITEM 11: STAFF REPORTS

- Report from Chairman: None
- Report from Planning Commission Engineer: None
- Report from Planning Director: Staff stated that Forsythia Farms Subdivision is almost ready for final plat approval and expects it to be submitted next month.
- Report from other Members: None

**ITEM 12: ADJOURNMENT**

With no further business to discuss, the meeting was adjourned by mutual consent.



Chairman

5-2-23

Date



Secretary

5-2-23

Date